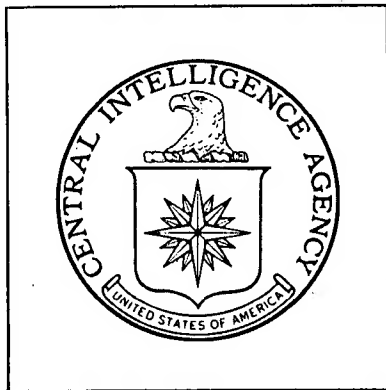


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**DIRECTORATE OF  
INTELLIGENCE**

**Industrial Facilities  
(Non-Military)**

*Basic Imagery Interpretation Report*

**Kuang-chou Chemical Fertilizer Plant**

**Kuang-chou, China**



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DATE DECEMBER 1968

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TITLE	NPIC	SEC. CLASS.	LOCATION
		Dec 1968	ms/m/x

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IMAGERY ANALYSIS SERVICE

RCS - 13/0069/69

INSTALLATION OR ACTIVITY NAME		COUNTRY
Kuang-chou Chemical Fertilizer Plant		CH
UTM COORDINATES	GEOGRAPHIC COORDINATES	WAC-PIC No
49QGR446602	23-08-20N 113-23-15E	0614-2-B1
MAP REFERENCE		
USATC 200, Sheet M0614-6HL, 4th ed., Dec 64, Scale 1:200,000		
(SECRET)		
LATEST IMAGERY USED		NEGATION DATE (If required)
		Not Required

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## ABSTRACT

The Kuang-chou Chemical Fertilizer Plant was in the final stages of construction when first observed on photography of January 1963. New construction, including ammonium hydroxide production facilities, was begun prior to August 1965. All production facilities at the plant appeared complete and operational on August 1967 photography. The major products of this plant are aqueous ammonia, ammonium sulfate, and superphosphate.

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#### INTRODUCTION

The Kuang-chou Chemical Fertilizer Plant is one of China's large producers of ammonia-based compounds and phosphate fertilizers. The plant is located approximately 7 nautical miles (nm) east of the center of Kuang-chou (Canton) on the north side of the Kuang-chou to Kowloon railroad (Figure 1).

A water treatment plant just east of the fertilizer plant treats water received from a tributary of the Chu Chiang River, which is a short distance to the south of the plant. Housing for the plant employees is located about 0.8 nm to the southeast of the plant.

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**BASIC DESCRIPTION**Physical Features

The plant, rectangular in shape, measures approximately 2,500 by 2,200 feet and occupies approximately 125 acres. The plant is rail served and secured by a wall on three sides (Figure 2). A row of trees along the west side of the plant probably obscures a fence (Figure 3).

Operational Functions

The primary function of this plant is the production of ammonia-based and phosphate fertilizers. The major production components are depicted and annotated on the line drawing (Figure 2). Ammonia is synthesized by combining hydrogen obtained from the "make run" and nitrogen obtained from the "blow run" of the water gas retorts (Item 3). Part of this ammonia is reacted with sulfuric acid to make ammonium sulfate (Items 19-21) and the remaining ammonia is dissolved in water to produce ammonium hydroxide (Area D). The superphosphate production facilities (Items 22-26) are not shown on Figure 3.

It should be noted that the two unidentified process buildings near the compressor building are identical to structures near the compressor buildings at nitrogenous fertilizer plants in Chu-hsien, Kai-feng, Shih-chia-chuang, Huai-nan, and Shang-hai (Wuching). As indicated by pipeline connection, these buildings are involved with ammonia associated processes. One of the buildings could possibly produce ammonium bicarbonate, but image characteristics have not yet been well enough established to identify this process from photography.

A small ammonia fertilizer pilot plant is situated in the northeast corner of the plant. An administration area and several support buildings are on the periphery of the production areas.

Status and Activity

The basic plant was in the final stages of construction on photography of January 1963 and reportedly went into the production of ammonium sulfate, ammonia, sulfuric acid, and superphosphate later the same year.<sup>3/</sup> Facilities for the production of ammonium hydroxide and a new fertilizer mixing and blending building were under construction on photography of August 1965. These two facilities reportedly went into operation in 1966.<sup>3/</sup> Good-quality photography of August 1967 showed all facilities to be complete. The only other new construction since 1965 was additional storage facilities (Figure 2). Vapors rising from the sulfuric acid plant and the ammonium sulfate reactor building and substantial rail traffic observed on the photography since 1965 showed the plant to be in operation (Figure 3).

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2. CIA. [ ] Information Report, The Canton Fertilizer Plant,  
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